De!	rin RI.000										
Work Orde October-25-13		8640		*108	3640*						Page 1
Item ID:	D3183-045	The state of the s	4	Accept	*N900	040	100)* ፡	Setup Sta	ırt *N	S1*
Revision ID: Item Name:	Bearing Asser	mbly						•	Sto		S2*
Start Date: Required Date: Reference:	10/25/13	Start Qty: 30.00 Req'd Qty: 30.00	*30* *30*		Cust Item 1 Customer:	D:					
Approvals:	Process Pla	an: _ <u>从</u> ∟ブ	Date: 13-10-25	Tooling:	Da	nte:]	Run Sta	!/	R1*
			Date:		Da	ıte:			Sto	^{op} *N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Re	vision Nbr									
D3183	Rev	v C1									
*100 *100* Hardinge Hardinge CNC Lath	ne Small	Hardinge CNC LATHE S Memo Turn D3183-	SMALL -9 Cap as per Folio FA388E	0.00 9-89	3/10/28			30	Ø		
*110 *110*		QC2- Inspect parts off management	achine FAI/FAIB	0.00 AS 44 9-89	13/10/28			30	\$		
Quality Control		MICHIO						`,			

QC8- Inspect parts - second check

0.00 \$ 13-10-31

Memo

Quality Control

DQA:			Date:			WORK ORDER MON	~	201501	20440165 / 11	DDATE			DART
QA Closed:			Date:			WORK ORDER NON-	-((JNFOI	RIVIANCE / U		Vork Order uj	odate only	AEROSPÁCE
Mork Orde						DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Work Orde	er. —					Rework	1		Skid tubo	Crasstuba	-	Water let	7
Part N	do.					Scrap		,	Skid-tube Machining	Crosstube Small Fab	- Dro	Water Jet d. Eng. Coor.	Engineering Quality
, are i	••· —					Use-as-is		l.	noforming	Finishing	_	re/Packaging	Other
NCR N	No.					Suspected Unapproved		111011	Large Fab	Composite	- 100/310	Supplier	
	_						,		20.80 100			oappe.[
Root					Desci	ription of work order update		nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	ription	Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre													
Material											1		
Operator													
Offset/Setup													
Process									,				
Supplier								4	₹				
Training													
Transport													•
Unapproved													
							FA	JLT CA	regory				
Landi	ng Ge	ar			_	General							
	∐_B ₀	ending				Bend		Folio/F	rogram		Outside Dim	ensions	Pressure/Forced
		entre No	t Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
	L C	racks				Broken/Damage/Defect		Hardwa	ire		Part Incorre	ct	Temperature/Cure
	L C	rimp/Kin	k/Ripple	/Wave		Burrs		Inspect	ion Incomplete/U	nqualified	Part Lost/M	issing	Weld
	L C	uffs				Contamination		Instruct	ions Incomplete/	Unclear	Part Moved		Wrong Stock Pulled
	Щcі	rushing				Countersink		Misalig	ned/off center	Γ	Positioned V	Vrong	
i	Шн	eat Trea	t ,			Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other
	ln	spection	n Strip in	Tube		Drawing		Misread	t	_			
	<u></u>	larks/Ch	atter			Drill Holes		Off-set					
	ا⊤ل_	urning So	equence			Finish		Out of (Calibration				
	Ιw	/ave/Tw	ist in Tub	e		Fit/Function		Out of	Sequence				

Work Orde				*108	8640*							Page 2
Item ID: Revision ID: Item Name:	D3183-6	045 Assembly		Accept	*N9000	140	100)* ፡	Setup	Start Stop	*N:	S1*
Start Date: Required Date: Reference:	10/25/13	3 Start Qty: 30.00	*30* *30*		Cust Item ID Customer:	:					ı W.	
Approvals:		s Plan:	Date:	Tooling: SPC (Y/N):	Dat Dat	e: e:]	Run	Start Stop	*N *N	R1* R2*
Sequence ID/ Work Center II 130 *120* Small Fab	D	Operation Description Small Fab Memo		Set Up/ Run Hours 0.00	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp
Small Fab 140 *140* QC Quality Control			-5 Bearing into D3183-9 C	0.00	DAS 27 9-89 3 11,01			30 Cauñ	7			
150 *150* Packaging Packaging		Identify as per dwg & Sto	ock Location: 5723.	5 .B 0.00				_30		DAS 28 3-89	13-11	!- <u>/</u>

DQA:			Date:											***	AA PT
O & Classed			Doto			WORK ORDER NON-	-CC	ONFO	RMANCE / U	PDATE	147	l. Od	F		AEROSPACE
QA Closed:			Date:								VV	ork Order up	date only		
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	PROCESS		
	_				_	Rework			Skid-tube	Crosstube	Г]	Water Jet	П	Engineering
Part N	No.					Scrap			Machining	Small Fab		Pro	d. Eng. Coor.	\dashv	Quality
	-					Use-as-is			noforming	Finishing	-	-{	e/Packaging	┪	Other
NCR I	No.					Suspected Unapproved			Large Fab	Composite	_		Supplier	┪	
-				,											
Root				<u> </u>	Descr	ription of work order update	1	Initial	Act	ion		Sign &		1	
Cause	_	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descr	ription		Date	Verification	4	QC Inspector
Design	Ш														
Doc/Data															
Equip/Tooling	Ш														
Handling/Pre														İ	
Material	Щ													-	
Operator															
Offset/Setup	Ц														
Process	Ш														•
Supplier															
Training	Ш														
Transport															
Unapproved															
							FAI	ULT CAT	TEGORY						
Landi	ng G	ear				General						_	_		
		Bending				Bend		Folio/P	rogram			Outside Dim	ensions		Pressure/Forced
	Щ	Centre No	t Concer	ntric		BOM/Route		Grain				Over/Under	tolerance	!	Set-up
	Щ	Cracks				Broken/Damage/Defect	<u> </u>	Hardwa	re			Part Incorred	it [Temperature/Cure
		Crimp/Kin	ık/Ripple	/Wave		Burrs		Inspecti	on Incomplete/Ur	nqualified		Part Lost/Mi	ssing	<u></u> ,	Weld
	Цʻ	Cuffs				Contamination		Instruct	ions Incomplete/U	Jnclear		Part Moved		,	Wrong Stock Pulled
;	LJ'	Crushing				Countersink		Misalig	ned/off center			Positioned W	/rong		
·		Heat Trea	t			Cut Too Short		Mislabe	led			Power Loss/S	Surge	\Box	Other
		Inspection	n Strip in	Tube		Drawing		Misread	l						
		Marks/Ch	atter			Drill Holes		Off-set							
:	∐'	Turning S	equence			Finish		Out of (Calibration						
		Wave/Tw	ist in Tub	e e		Fit/Function		Out of	Sequence						

Work Order ID 108640

400040

Quality Control

October-25-13				"TONN4O"								
Item ID: Revision ID: Item Name:	D3183-045 Bearing Asse	mbly		Accept	*N900	04010 0)* Setup	Start Stop	*NS1* *NS2*			
Start Date: Required Date: Reference:	10/25/13	Start Qty: 30.00 Req'd Qty: 30.00	*30* *30*		Cust Item I Customer:	D:			,			
Approvals:	Process Pl	an:	Date:	Tooling: SPC (Y/N):		ate:	Run	Start Stop	*NR1* *NR2*			
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool # Plan Code	Accept Ro	•	Reject Insp. Number Stamp			
*160 *160* QC		QC21- Final Inspection -	Work Order Release	0.00				2/	13-11-06			

pl3-11-01

DQA:			Date: _			WORK ORDER MON	~			DATE.					DART
QA Closed:			Date:			WORK ORDER NON-	-CC	JNFOI	RIVIAINCE / UF		Woi	rk Order up	date only		AEROSPACE
						DISPOSITION				AGAINST	DEP	ARTMENT	/PROCESS		
Work Orde	er:					Rework			Skid-tube	Crasstubal			Water Je	.—] [
Part N	١n					Scrap			Machining	Crosstube Small Fab	_	Pro	d. Eng. Coor		Engineering Quality
, 2, 2,	···—				_	Use-as-is			noforming	Finishing	\dashv		re/Packaging	-	Other
NCR N	No				_	Suspected Unapproved			Large Fab	Composite		Supplier			
Root	<u> </u>				Desci	ription of work order update	1	nitial	Acti	ion		Sign &			
Cause	D	ate	Step	Qty		or non-conformance	Ch	ief Eng	Descr	iption		Date	Verification	on	QC Inspector
Design															
Doc/Data															
Equip/Tooling															
Handling/Pre	Ш														
Material						•					1				
Operator															:
Offset/Setup												·			
Process															
Supplier															
Training															
Transport															
Unapproved]												
							FA	ULT CAT	EGORY						
Landi	ng Gear					General				-				_	-
/	Ben	ding			<u>. </u>	Bend		Folio/P	rogram		Щ́	Outside Dim	ensions		Pressure/Forced
/	Cent	re Not	Concen	itric		BOM/Route	$ldsymbol{ld}}}}}}}$	Grain				Over/Under	tolerance	L	Set-up
	Crac					Broken/Damage/Defect		Hardwa	re			Part Incorred	et		Temperature/Cure
	Crim	ıp/Kink	:/Ripple,	/Wave		Burrs		Inspecti	on Incomplete/Un	qualified	F	Part Lost/Mi	ssing	L	Weld
	Cuff					Contamination		Instruct	ions Incomplete/U	Inclear		Part Moved		L	Wrong Stock Pulled
	—	hing				Countersink		Misalig	ned/off center			Positioned V	Vrong		_
	Hea	t Treat				Cut Too Short		Mislabe	led			ower Loss/	Surge		Other
	Insp	ection	Strip in	Tube		Drawing		Misread	i	•					
	Mar	ks/Cha	tter			Drill Holes		Off-set							
	Turr	ning Sec	quence			Finish		Out of (Calibration		-				
	l lway	e/Twis	t in Tub	e		Fit/Function		Out of s	Contionco		_				

108640 *D3183-045*

Start Date: 10/25/13

Required Date: 11/08/13

Page 1

Start Qty: 30.00

Required Qty: 30.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3183-5 *D3183-5* Bearing		Manufactured	No			110	Each	77.0000	**	30	13/11	,/01	_{DA} S 36 ₉ 89
Source So				Location		Loc	Qty	Loc Code			/	,	
				ST235			1						
					106275		1		_				
				ST235B			76		-		_		
					107706		74			30_	_		
					98653		2		_		_		
MDELRINR1.000		Purchased	No			130	f	7.6300	0.0333	2			
MDFI RIN	JR1 000)							**			Ē	

Delrin Round Bar 1"

Loc Code Location Loc Qty MAT 7.63 **¾**m126794 7.63

1.8, Et 13/10/31

DQA:			Date:	· · · · · · · · · · · · · · · · · · ·										•	[™]
QA Closed:			Date:			WORK ORDER NON-CONFORMANCE / UPDATE Work Order update only									
QA CIOSCU.			Dutc.									•		11	
Work Orde	er:					DISPOSITION				AGAINST D	EPART	MENT,	/PROCESS		
						Rework	1		Skid-tube	Crosstube			Water Jet		Engineering
Part N	۱o					Scrap]		Machining	Small Fab		Pro	d. Eng. Coor		Quality
						Use-as-is		Thern	noforming	Finishing	R	ec/Sto	re/Packaging	\vdash	Other
NCR N	No				_	Suspected Unapproved]		Large Fab	Composite _			Supplie	ſЦ	
Root					Desci	ription of work order update	T	Initial	Actio	n	Sig	gn &			,
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	tion	D	ate	Verification	on	QC Inspector
Design	\Box														
Doc/Data															
Equip/Tooling															
Handling/Pre	\square						1								
Material	\sqcup														
Operator	H														
Offset/Setup	Н						-				į		,		
Process	\vdash											•			
Supplier	\vdash										ļ			**	
Training Transport	H														
Unapproved	\Box														
эрр. отса				i			FA	ULT CA	TEGORY				!		
Landi	ng Ge	ar				General									
	Пв	ending				Bend		Folio/F	rogram	Γ	Outs	ide Dim	nensions		Pressure/Forced
	C	entre No	t Concer	ntric		BOM/Route		Grain			Over	/Under	tolerance		Set-up
	Cı	racks				Broken/Damage/Defect		Hardwa	are	Ī	Part	Incorre	ct	П	Temperature/Cure
	Ci	rimp/Kir	ık/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Unqu	ualified	Part	Lost/M	issing		Weld
	L C	uffs				Contamination		Instruct	tions Incomplete/Und	clear	Part	Moved			Wrong Stock Pulled
		rushing				Countersink		Misalig	gned/off center		Posit	ioned V	Vrong		•
	Щн	eat Trea	t			Cut Too Short		Mislabe	eled		Powe	er Loss/	'Surge		Other
	Шln	spection	n Strip in	Tube		Drawing		Misread	d						
	${f -}$	larks/Ch				Drill Holes		Off-set			-				
	_	_	equence			Finish		Out of	Calibration						
	Ilν	/ave/Tw	ist in Tub)e	- 1	Fit/Function		Out of	Seguence						

DART AEROSPACE LTD	Work Order:	108640
Description: Cap	Part Number:	D3183-9
Inspection Dwg: D3183 Rev: C1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	Prototype
---	---------------	-----------

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.830	+/-0.005	, 830	7		FK-04	Venn -
Ø0.720	+/-0.002	.720	7		h	4
Ø0.747	+/-0.001	0747	7		h	n
R0.010	+/-0.010	e 010	7		R- G	
R0.031	+/-0.010	.031	7		1,	
0.199	+/-0.001	.199	7		FK-04	Vern.
0.276	+/-0.010	.2765	7		~ ~	Vern.
0.039	+/-0.010	,०३१	7		n	n
					•	
		-				

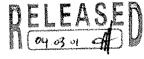
Measured by:	FK	Audited by:		Prototype Approval:	N/A
Date:	13/10/28	Date:	150,51	Date:	N/A

i	Rev	- Date	Change	Revised by	Approved
	Α	04.04.20	New Issue (P/O D3183-045)	KJ/RF	1
	В	06.03.09	Dimension Ø0.830 was Ø0.850	KJ/JLM	ad
				771	





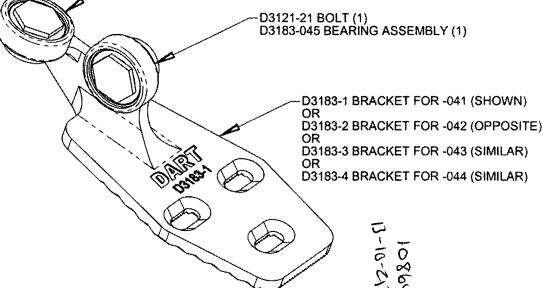
DESIG	#	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECK	罪	APPROVED	DRAWING NO. D3183	REV. C	
DATE	04.	02.17	BRACKET ASSEMBLY	SCALE 1:1	
 Α.	C	3.01.24	NEW ISSUE		



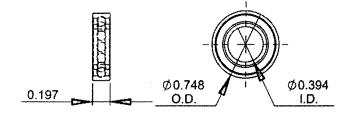
DEO ATTACHED

04.02.17		04.02.17	BRACKET ASSEMBLY		
•	Α.	03.01.24	NEW ISSUE		
	В	03.06.17	REMOVE BEARING; 1.012 WS 0.882		
	С	,04.02.17	ADD -045/-9; 0.182 WAS 0.431	****	
	Cı	-117 04.11.09	0.830 WAS 0.850	***************************************	

D3121-21 BOLT (1) D3183-045 BEARING ASSEMBLY (1)

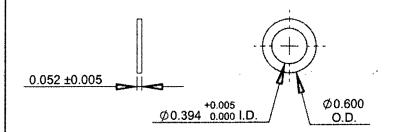


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR) D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

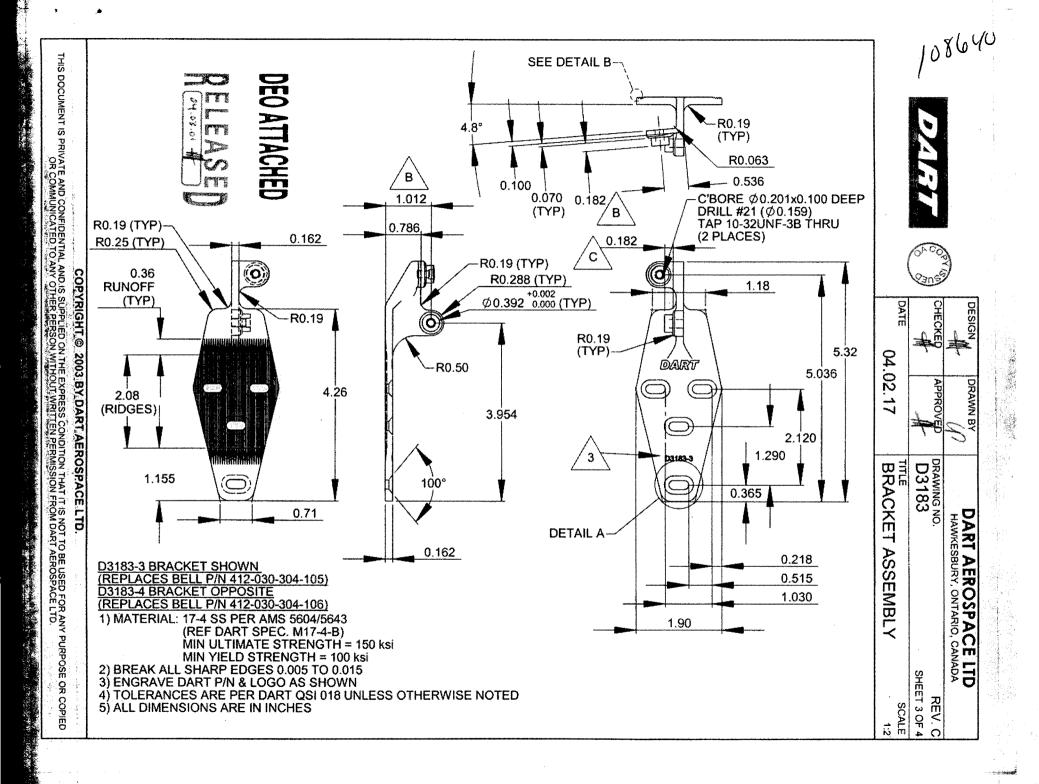


D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) **ANNEALED**
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010 3) TOLERANCES ARE PER DART QSI 018 **UNLESS OTHERWISE NOTED**
- 4) ALL DIMENSIONS ARE IN INCHES

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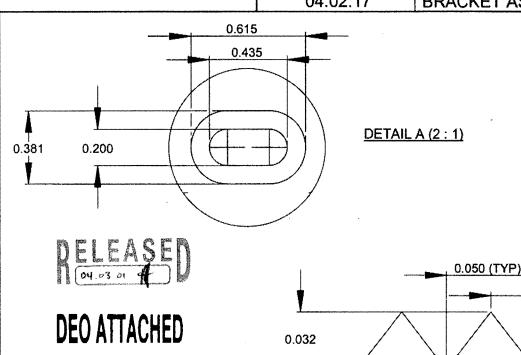
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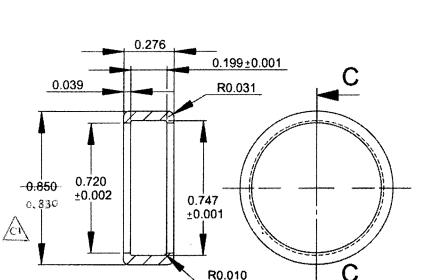




DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED	APPROVED	DRAWING NO. D3183	REV. C SHEET 4 OF 4	
DATE 04	02.17	BRACKET ASSEMBLY	SCALE 1:1	



DETAIL B (20:1)



SECTION C-C SCALE 2:1

D3183-9 CAP

1) MATERIAL: DELRIN ROD, Ø1.00 (REF DART SPEC. M-DELRIN-R1.00) 2) TOLERANCES ARE PER DART QSI 018

0.025 (TYP)

- **UNLESS OTHERWISE NOTED**
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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DRAWING N	NO. TITLE		, REV.C1	DART AEROSPACE LTD	D.E.O. NO.	SHEET NO.	SCALE
D3183	BRACKET	ASSEMBLY		ENGINEERING ORDER	D3183-C1-1	SHEET 1 OF 1	NTS
DRAWN	P	CHECKED		MFG. APPR.	APPROVED M	DE APPR.	
DATE	10.05.14	DATE	10.06.30	DATE (8.06.30	DATE 10/06/30	DATE 10/06/30	

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT:

Cr = 1720 N (386 lb) MIN [DYNAMIC]

Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012



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